Marked-up Claims

3. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [and 2] characterized because it transforms a cone of incident light into electrical energy, with a spectrum corresponding to each particular case and coming from a medium with any refraction index.

4. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3] characterized for its use in photovoltaic solar energy applications, for which the particular spectrum comes from the sun and in which the converter is assembled to an optical concentrator which increases the luminous intensity coming from the sun.

5. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 4] characterized because the photovoltaic converter is assembled to an optical concentrator by means of silicone rubber, epoxy, resins or something similar.

6. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3] characterized for producing electrical energy from heat sources (stoves and the like) and whose particular spectrum is, mainly, infrared.

7. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1[, 2, 3 and 6] characterized because the photovoltaic converter is assembled to an optical concentrator by means of silicone rubbers, epoxies, resins or something similar.

8. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3] characterized by carrying out the conversion of light channeled by optical fiber and coming from a laser into electricity for high-risk environments such as the powering of sensors and electronics in applications such as mines, high-tension grids, the chemical and petrochemical industries, nuclear power plants, airplanes, rockets, satellites, biomedicine, etc.

9. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 5] characterized because its encapsulation is carried out by means of optoelectronic techniques such as: a) fixing the converter by means of its rear contact to a support using epoxy or solder, and b) connection of

the front contact by means of wire bonding, pick and place, flip-chip, multichip-module or something similar.

10. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 4; or 1 to 5; or 1 to 5 and 9] characterized because it consists of a single semiconductor junction.

11. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 4; or 1 to 5; or 1 to 5 and 9] characterized because it consists of several semiconductor junctions.

12. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3 and 6] characterized for possessing a monolithic connection in series in order to increase the output voltage.

13. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3 and 6] characterized because it consists of a single semiconductor junction.

14. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3 and 6] characterized because it consists of several semiconductor junctions.

15. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 3 and 8] characterized for possessing a monolithic connection in series in order to increase the output voltage.

16. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1[, 2, 3, 6 and 7] characterized because its encapsulation is carried out by means of optoelectronic techniques such as: a) fixing the converter by means of its rear contact to a support using epoxy or solder, and b) connection of the frontal contact by means of wire bonding, pick and place, flip-chip, multichip-module or something similar.

17. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology according to claim[s] 1 [to 16] characterized because the design parameters (semiconductor structure of III-V compounds, ohmic contacts, geometry, metal grid and antireflection layers) are calculated by means of a multivariable optimization.

TRANSLATION OF AMENDED CLAIM 1

1. High efficiency photovoltaic converter for high luminous intensities manufactured using optoelectronic technology characterized because a) its semiconductor layers are made of III-V compounds, b) it works at luminous power densities greater than 1 W/cm^2 , c) its size is in the range of tenths to tens of square millimeters, d) as a result of its reduced size photolithography is used for the definition of the numerous photovoltaic converters on the same semiconductor wafer, as well as for the shape of the frontal grid of each of them, and finally, e) the separation of the converters on the same semiconductor wafer is carried out by sawing or by cutting with a point or cleaving or other similar techniques.